

FOOD AND NUTRITION I

(FOOD AND FITNESS)

Levels: 9-12

Units of Credit: .5

CIP Code: 20.0108

Prerequisite: None

COURSE DESCRIPTION

FOOD AND NUTRITION I (Food and Fitness) (.5 credit) This course is designed for students who are interested in understanding the principles of nutrition and in maintaining a healthy life style. Attention will be given to the selection and preparation of food and personal health and well-being. (Standards 1-6 will be covered on Skill Certification Test # 340.)

CORE STANDARDS, OBJECTIVES, AND INDICATORS

STANDARD

20.0108-01 Students will apply the skills of kitchen equipment and management.

OBJECTIVES

20.0108-0101 Identify and explain the appropriate use and care of selected kitchen equipment.

- Locate food preparation equipment in the laboratory
- Identify various types of kitchen equipment
- Select appropriate equipment for specific product preparation
- Use various types of food preparation equipment
- Demonstrate the proper use and care of equipment
- Employ standard safety procedures when using equipment

20.0108-0102 Explain the basic principles of cooking in a microwave.

- Identify that microwaves are attracted to fat, sugar, and water molecules
- Explain basic microwave cooking rules
- Identify how microwaves cook food
- Identify appropriate cooking containers
- Discuss cooking time, standing time and ways to increase even cooking
- Discuss prevention of burns and exploding or splattering of food

20.0108-0103 Identify appropriate abbreviations, food-measurement terminology, techniques, equivalents, and calculate recipe-size adjustments and demonstrate proper measuring techniques.

- Identify abbreviations
- Compute equivalents
- Identify measuring techniques and utensils
- Double and cut recipe size in half
- Consistently demonstrate proper measuring and preparation techniques

20.0108-0104 Explain basic food-preparation terminology.

- Identify terms to include: chop, cream cut in, dice, flour, fold in, grate, knead, mince, peel, sauté, simmer, steam and whip

STANDARD

20.0108-02 Students will consistently demonstrate kitchen safety procedures and sanitation techniques.

OBJECTIVES

20.0108-0201 Apply established safety rules and guidelines to maintain a safe working environment.

National Standard 14.4.1

- Identify safety practices for using electric appliances
- Explain how to extinguish a grease fire
- Explain why cleaning supplies should be stored away from foods
- Discuss ways to prevent burns, fires, falls and electrical safety
- Demonstrate appropriate lifting techniques

20.0108-0202 Identify proper first-aid procedures for cuts, burns, and electrical shock.

- Identify ways to prevent poisoning and chemical contamination
- Identify basic first-aid for cuts and burns
- Identify proper first-aid procedures for electrical shock

20.0108-0203 Identify and apply sanitation rules and guidelines.

National Standard 14.4.1

- Identify proper hand washing and dishwashing techniques
- Discuss disinfecting of work surfaces
- Discuss appropriate use of gloves
- Identify appropriate clothing and hair coverings

20.0108-0204 Identify methods that prevent food-borne illnesses and contamination.

National Standard 14.4.1

- Identify food-borne illness
- Identify types of food-borne illness and their symptoms: botulism, e-coli, hepatitis, salmonella, staphylococci
- Explain prevention techniques
- Identify temperature zones and the importance of cooking to proper temperatures
- Identify temperature zones and the importance of cooling and reheating foods to the correct temperature
- Explain how to correctly thaw foods

STANDARD

20.0108-03 Students will explore the dietary guidelines and food guide pyramid.

OBJECTIVES

20.0108-0301 List the nine recommended dietary guidelines and the key recommendations for each.

See www.healthierus.gov/dietaryguidelines

(The guidelines are listed below)

National Standards 14.3.1

1. Adequate nutrients within caloric needs.
2. Weight Management
3. Physical Activity.
4. Food Groups to Encourage
5. Fats
6. Carbohydrates
7. Sodium and Potassium
8. Alcoholic Beverages
9. Food Safety

- 20.0108-0302 Demonstrate knowledge of, serving size, and food sources related to my pyramid National Standard 14.3.1 See my pyramid.gov
- Explain how all food groups are important to good health and one group cannot replace another
 - Identify the nutrients provided by each group
 - Explain discretionary calories
 - Explain how people have different needs for calories and nutrients depending upon their age, gender, body size, and activity level

- 20.0108-0303 Students will evaluate their diets using the dietary guidelines and their own my pyramid National Standard 14.3.1 See my www.pyramid.gov

STANDARD

20.0108-04 Students will identify the sources and function of carbohydrates and fiber and apply appropriate food preparation techniques.

OBJECTIVES

- 20.0108-0401 Identify carbohydrates, their sources, and functions and the importance of whole grains in the body.
National Standard 14.2.1
- Define simple and complex carbohydrates
 - Identify function and sources of simple and complex carbohydrates
 - Describe how carbohydrates are broken down during the digestion process
- 20.0108-0402 Identify fiber, its sources and functions.
National Standard 14.2.1
- Identify the function of fiber
 - Identify cellulose - non digestible fiber
 - Discuss the importance of liquids in the role of bowel function
 - Discuss why the National Cancer Institute recommends 20-35 grams of daily fiber
 - Identify foods high in natural fiber, and how to increase the bulk in low-fiber foods
- 20.0108-0403 Apply food selection and preparation guidelines related to quick breads, rice, grains, and pasta.
National Standard 14.3.3
- Identify basic cooking techniques related rice, grains, and pasta
 - Identify examples of quick breads: muffins, pancakes, waffles, biscuits, corn bread, nut/fruit bread, popovers
 - Identify the role of each ingredient contained in quick breads
 - Actively participate in the preparation of quality complex carbohydrate food product(s)

STANDARD

20.0108-05 Students will identify the sources and functions of proteins and fats and apply appropriate food preparation techniques.

OBJECTIVES

- 20.0108-0501 Identify proteins (complete and incomplete), their sources, and functions in the body.
National Standard 14.2.1
- Define amino acids, complete and incomplete proteins
 - Identify examples of complete and incomplete proteins
 - Identify the function of protein in the body
- 20.0108-0502 Apply food selection and preparation guidelines related to egg products.
National Standard 14.3.3
- Identify functions of eggs: binder, thickener, coating, leavening agent, emulsifier

- Identify egg cooking temperatures, techniques/methods: hard cooked, soft cooked, scrambled, fried, and poached
- Identify stages of beaten egg whites: foam, soft peaks, and stiff peaks
- Identify appropriate storage of eggs
- Prepare a protein food product

20.0108-0503 Apply food selections and preparation guidelines related to milk and milk products.

National Standard 14.3.3

- Identify serving sizes and amounts for various age groups
- **Define pasteurization, homogenization, and fortified milk**
- Identify methods of lowering fat in recipes by using a lower fat content milk or milk product

20.0108-0504 Identify fats, their sources, function, and related health concerns.

National Standard 14.2.1

- Identify the functions of fats: carrier for vitamins A, D, E, and K, reserve supply of energy; adds flavor in food; satisfies hunger, protects internal organs from shock and injury, insulates the body from shock and temperature changes
- Explain the role of cholesterol including HDL and LDL factors
- Identify the differences between saturated, mono-unsaturated, poly-unsaturated fats, and trans-fatty acids.

STANDARD

20.0108-06 Students will identify the sources, function of vitamins, minerals and water and apply appropriate food preparation techniques

OBJECTIVES

20.0108-0601 Identify vitamins, their sources, functions, and deficiencies in the body.

National Standard 14.2.1

- Identify the body processes that are regulated by vitamins; for example, nerves, muscles and skin all require vitamins to function properly
- Discuss the importance of folate (folacin/folic acid) in preventing neural tube birth disorders
- Identify water soluble vitamins—C and B (thiamin, riboflavin, niacin, folate (folacin/folic acid))
- Identify fat soluble vitamins—A, D, E, and K

20.0108-0602 Identify minerals, their sources, functions, and deficiencies in the body.

National Standard 14.2.1

- Discuss macro minerals, electrolytes, and trace minerals
- Identify the problems associated with calcium and iron

20.0108-0603 Identify the functions of water in the body.

National Standard 14.2.1

- Identify the functions of water
- Discuss why water is the most important of all the essential nutrients
- Identify daily recommendation of water
- Identify symptoms of dehydration and how to prevent it

20.0108-0604 Apply food selection and preparation guidelines related to fruits and vegetables.

National Standard 14.3.3

- Identify the nutrients provided by vegetables
- Identify how to preserve nutrients in the food preparation process
- Discuss how air, heat and water destroy nutrients
- Identify common preparation methods for vegetables: micro cooking, bake, steam, stir fry, simmer, sauté

- Identify how to select fresh fruits and vegetables
- Identify appropriate storage for fruits and vegetables
- Discuss how to prevent oxidation of fresh fruits
- Prepare vegetable and fruit food product(s)